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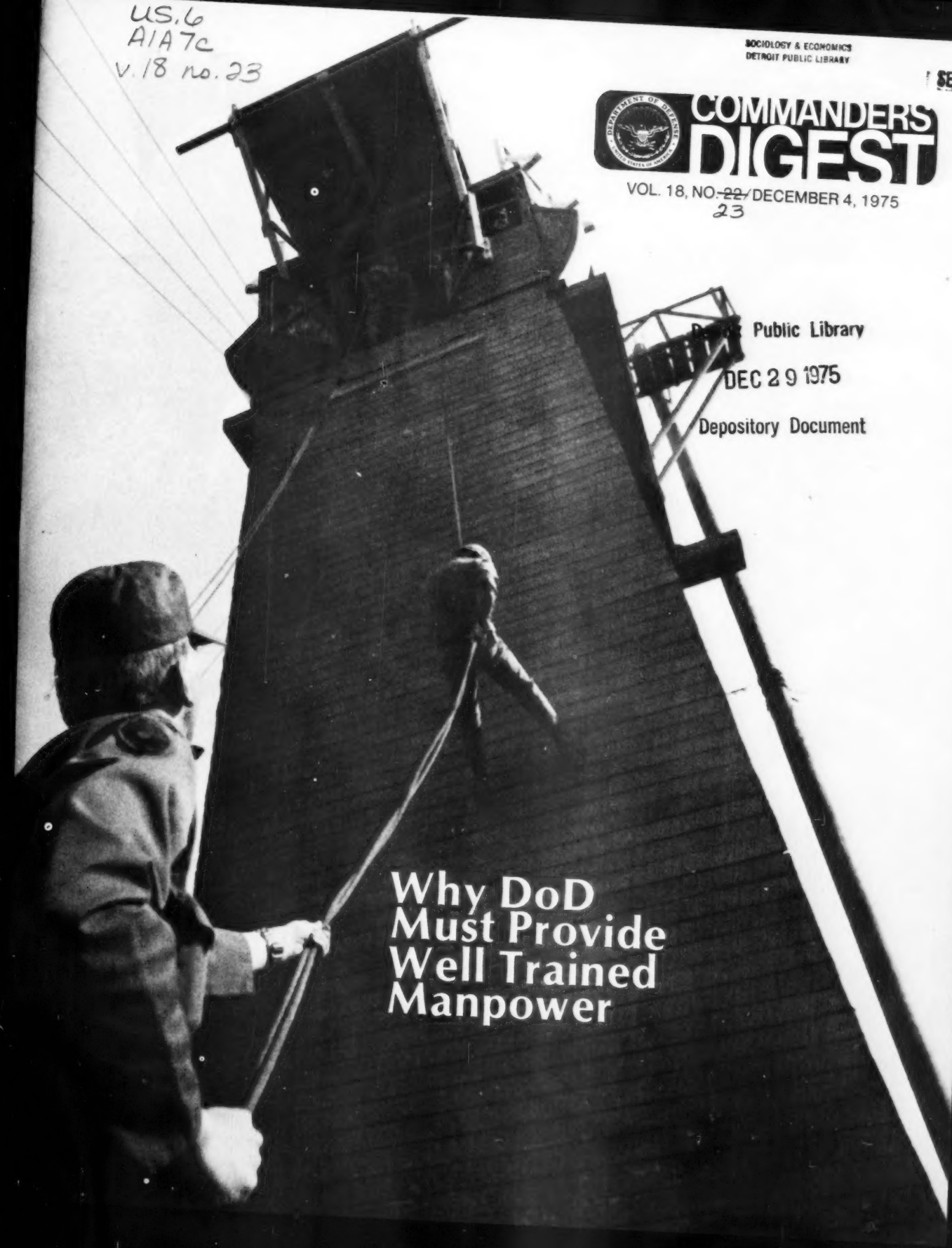

Why DoD Must Provide Well Trained Manpower

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Intensified Training Provides Combat Effectiveness

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(Manpower Requirements & Analysis)

Individual training is a very large enterprise as well as a very important one. Unlike civilian industry, the Department of Defense must train most of its personnel in the skills needed rather than hiring people who are already trained. The statistics on Chart 1 will give you an indication of the magnitude of the training effort.

In effect, an average of 255,000 military personnel are receiving training at any point during the year. Training loads are subject to annual review and authorization by the Congress and thus act as a ceiling on the amount of training we do. About 10 per cent of the students and trainees are members of the Reserve components who are being trained by the training establishments of the active Services to prepare them for filling positions in Reserve units. The total cost of DoD's individual training programs in Fiscal Year 1976, including pay and allowances of students and support personnel, training operating costs, costs of operating training bases, and other costs attributable to the mission, will be approximately $6.8 billion.

Chart 2 provides another way to view the scope of individual training.

It demonstrates how manpower in the training establishment (including trainees) has grown, and then contracted, over the past 12 years. The size of the training establishment is largely a function of the number of new entrants to the force—officer and enlisted, active and Reserve—who must receive training.

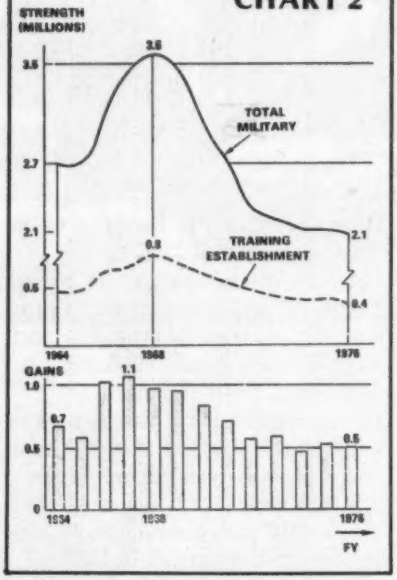
CHART 1

FY 1976 ACTIVE AND RESERVE TRAINING LOADS
(Manyears in Thousands)

Training Category	Total
Recruit Training	76
Officer Acquisition Training	18
Specialized Skill Training	140
Flight Training	6
Professional Development Education	15
Total	255

Rigorous training such as rappelling from a 34-foot practice tower by members of an Army infantry unit (cover) and crawling en masse across a mud field at the Navy's underwater demolition training school prepares specialists for the worst battlefield conditions.

CHART 2



SIZE FACTORS

The major factors which influence the size, scope, and content of training programs include:

- Force readiness and combat effectiveness.
- Manning the force — training new people to replace losses and providing advanced skills to the career force.

The importance of individual training to the readiness of the force to carry out its mission cannot be over-emphasized. This simple formula illustrates this relationship:

COMBAT EFFECTIVENESS = EQUIPMENT X TACTICS X TRAINING

If any of these three elements is lacking, the value of the other two is eroded. The best tanks and armor tactics will not prevail on the battlefield if the tank crews are not well trained in gunnery and maintenance. DoD current training programs produce skilled personnel of high quality and this quality is an indispensible ingredient of ready forces and success in war. If DoD knew when and where a war involving U.S. forces would break out, a lower standard of training could be tolerated. Since DoD does not have this advantage, U.S. forces must be provided with well-trained manpower. If combat divisions were used to provide the recruit and initial skill training now conducted in training centers and schools, the divisions would be in a very unready state.

The amount of training conducted is largely driven by the need to replace losses in the force. Training in DoD can be divided into two parts: accession-related training, which is conducted for the purpose of turning a civilian into a qualified service member with a usable skill; and other training, which, for the most part, is conducted for preparing members in subsequent stages of their military careers for more demanding duties. Chart 3 displays this distinction in the FY 1976 training program.

In FY 1976, about 500,000 new members will enter the Services. As Chart 3 shows, about three-quarters of all training of active force members is provided to new members of the force. The timely training of these members insures a continuing flow of trained manpower into the force to replace losses in each skill. The remaining one-quarter of active force training loads provides training to equip service members for duties beyond the initial entry level, including duties involving increasing supervisory responsibilities. This training is necessary because the military Services are essentially closed personnel systems. Many military skills have no civilian equivalents.

Leaders, managers and highly skilled technicians must be developed within the Services through a combination of schooling and experience on the job.

Training Efficiency

Some of the actions now being taken to operate the training establishment as efficiently as possible will now be discussed. DoD's goal in this regard, and some of the ways being sought to achieve it, are summed up in the following statement:

The goal is to conduct no more than the required amount of training, using the minimum necessary resources.

Ways of achieving this goal are:

- Control the amount of formal training with longer terms of enlistment—therefore fewer accessions will be needed.
- Restrict training to the minimum required—tailor courses to job requirements.

CHART 3

DISTRIBUTION OF ACTIVE FORCE TRAINING FY 1976

Initial Training	**76 per cent**
Advanced Training	**24 per cent**

Working with allies, like commando training in Europe (top), as well as interservice exercises, shown in this table-top field problem, broadens the combat proficiency of the Total Force.

- Reduce training loads
  - —Total loads in FY 1973-76: -16 percent;
  - —Flight Training loads in FY 1974-76: -24 per cent;
  - —Graduate education loads in FY 1973-76: -28 per cent.
- Control the amount of resources devoted to training.

DoD is in a rather unique position among training institutions in being both the trainer and the employer of trained manpower. It is therefore to the Department's advantage not only to turn out well-trained personnel but also to do so in the shortest possible time with the lowest feasible use of resources. These pressures act, in practice, to promote efficiency in the conduct of individual training.

In discussing training resources, concentration must be put on manpower devoted to the training mission, a subject which has received considerable scrutiny in the Congress.

A seaman in training at the Navy's diving school at San Diego, California, checks the air tanks with a pressure guage to ensure an adequate supply of air for the next test dive.

CHART 4

"STUDENT-TO-STAFF" RATIOS

Vocational Schools	2:1 to over 100:1
Public High Schools	19:1
Colleges and Universities	15:1
Department of Defense	1.5:1

Much of the criticism which has been aimed at the staffing of the training establishment has been based on a comparison of "student-to-instructor" ratios or "student-to-staff" ratios in the Defense training establishment with those in civilian educational institutions. The ratios most frequently quoted are those seen in Chart 4.

DoD has begun a study of these comparisons, using staffing data from sample civilian institutions and military training activities. Following are some of the preliminary findings.

One fundamental problem in making these comparisons is that civilian school data used in these ratios typically include only instructors, or only manpower in the school itself, and thus exclude types of manpower which are included in DoD figures. Beyond this statistical problem, there are very significant differences in staff workloads and functions and in methods of instruction.

First, one must consider the proportion of instructors. The average ratio of students to instructors in all types of Defense training is about 5:1. DoD's sample survey data indicates that there is good reason for a relatively high proportion of instructors in military training, as is illustrated in Chart 5.

It is noticeable that the hours of instruction per month in DoD training bases are significantly greater and that a high proportion of the training is

CHART 5

FACTORS INFLUENCING REQUIREMENTS FOR INSTRUCTORS

Hours of instruction per month

Civil Sector	DoD
Vocational Schools 100-120	Skill Training Bases 135-165
Public High Schools 95-100	
Universities 50-70	

Factors of "Hands-on" Training

Civil Sector	DoD
Vocational Schools 35-70%	Skill Training Bases 45-75%
Public High Schools 5-20%	
Universities None to 30%	

DoD training requires supervision in use of dangerous or expensive equipment (e.g., explosives, weapons, aircraft)

"hands-on" training, which uses more instructors than lecture-type instruction. As these factors show, a simple comparison of numbers of students and numbers of instructors substantially distorts the requirement for instructors on the basis of workload. This is also true when the basis of comparison is the ratio of students to total staff and faculty.

The following factors influence the size of non-instructional staffs:

- High turnovers in DoD schools increases administrative requirement.
- DoD schools feed and house nearly all students.
- DoD schools also develop, operate and maintain sophisticated training aids (e.g., simulators); operate and maintain complex training equipment (e.g., aircraft, tanks, firing ranges); write and publish textbooks; administer non-resident instruction programs, and develop operational doctrine for organizations in the field.

Chart 6 compares manpower and workload data for a DoD skill training base with similar data from a civilian university. The chart shows how the ratios of workload to manpower are affected if we adjust for the difference in the hours of instruction given at the two institutions.

This is obviously an imperfect analysis, as is bound to be the case with any comparison of such substantially different activities. However, it seems reasonable to draw the conclusions that statistics are not comparable, and when statistics are adjusted to improve comparability, student-to-staff ratios do not indicate inefficiency in DoD staffing.

DoD strongly believes that the dialogue on the proper level of training staffing should not rest on such an unsound basis. At the same time, the Department does not claim that the efficiency of the training establishment is beyond improvement. DoD is taking action to examine the efficiency of its training programs, and, where the potential exists, to raise the level of efficiency. These actions include the following:

CHART 6

COMPARISON OF WORKLOAD AND STAFFING OF TWO INSTITUTIONS

	Sample Liberal Arts University	Ft. Gordon, Ga.
Manpower		
Instructors	699(a)	1,924
Total Faculty and Staff(b)	1,191	3,741
Workload		
Enrolled Students	5,445(a)	5,981
FTE Students (c)	1,980	5,981
Ratios		
Enrolled Students Per Instructor	7.8	3.1
Enrolled Students per Faculty/Staff	4.6	1.6
FTE Students Per Instructor	2.8	3.1
FTE Students Per Faculty/ Staff	1.7	1.6

(a) Part-time students are included as one-half of a full-time student; part-time instructors as one-half of a full-time instructor.
(b) Excludes facilities maintenance and other "base operating support" manpower; excludes volunteer workers at university.
(c) "Full-time equivalent" students, based on an eight-hour day, five days a week. Instructional time is 60 hours per month for university and 165 for military school.

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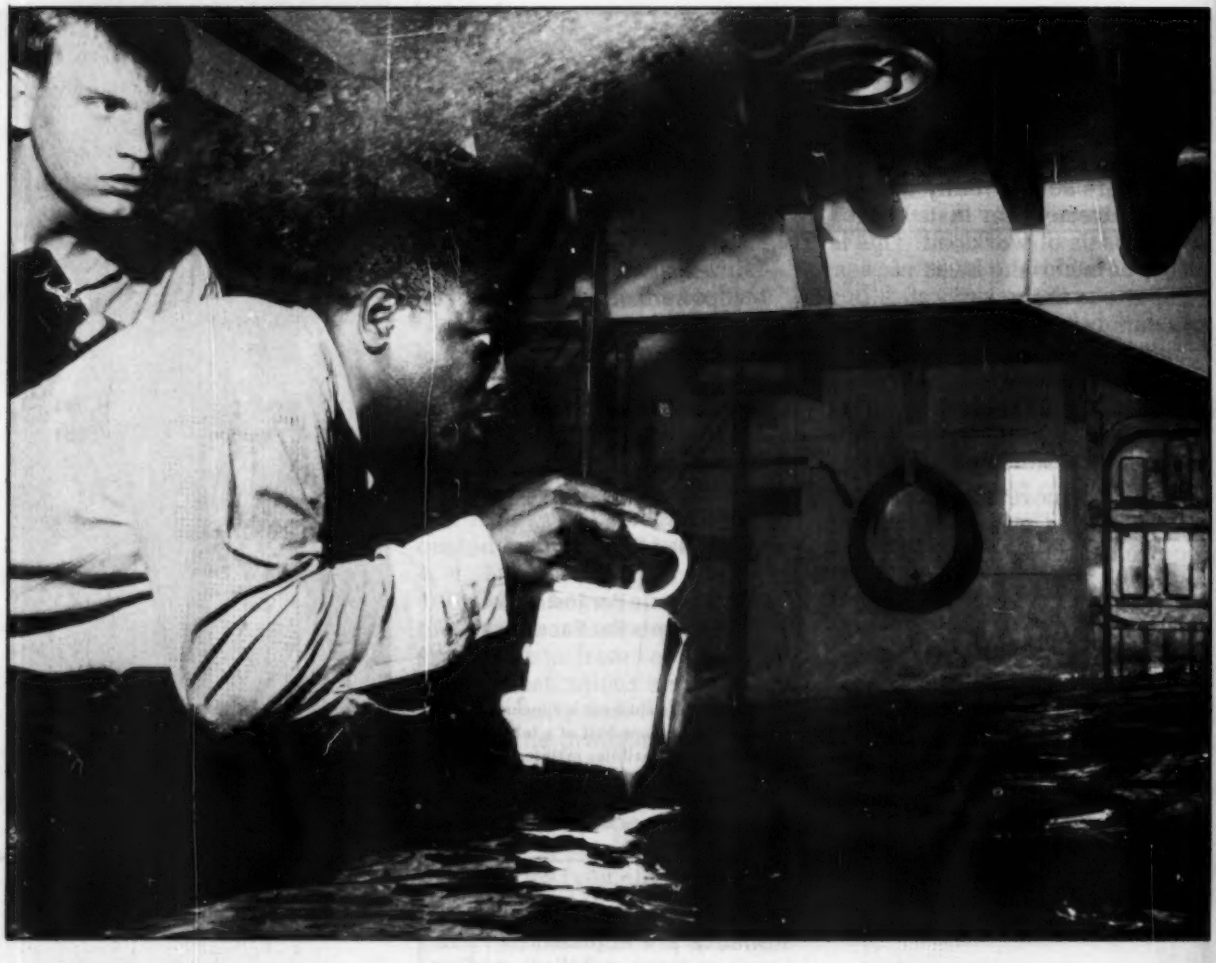

DoD schools develop, operate and maintain complex training equipment like the wet environmental trainer (above) where seamen solve simulated ship damage control problems.

- Recent reductions in training manpower.
- Review of interservice training opportunities.
- Training manpower study.

Training is essential to maintaining the readiness of the force. Most of DoD's training programs are conducted for the purpose of bringing new people into the force and providing them with necessary skills. In carrying out its training programs, DoD is fully aware of the need to achieve economies wherever possible. DoD will continue to examine and evaluate training programs with the greatest care to assure that they produce effectively trained personnel with a reasonable expenditure of resources.

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